

NOTES ON GEOGRAPHIC DISTRIBUTION

Mammalia, Chiroptera, Molossidae, *Molossops neglectus*: First record in the State of Paraná, Brazil.

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Molossops neglectus Williams & Genoways, 1980, is a small-bodied molossid bat, weighting approximately 15 g (Emmons and Feer 1997) and a forearm length varying from 34.8 to 40.0 mm (Gregorin and Taddei 2002; Gregorin et al. 2004; Bernardi et al. in press). In spite of its broad distribution in the Neotropical region, few specimens of this species have been collected in Suriname, Peru, Venezuela, Guyana, Colombia, Argentina, and Brazil (Ascorra et al. 1991; Ochoa et al. 1993; Lim and Engstrom 2001; Barquez et al. 1993; 1999; Gregorin et al. 2004). In Brazil, *M. neglectus* is a forest dweller species and it has records in the Amazon rainforest in Belém, State of Pará, in the evergreen Atlantic rainforest in Salesópolis and Paulo de Frontin, States of São Paulo and Rio de Janeiro, respectively, and in the seasonal semideciduous forests in Itu and Gália (Estação Ecológica dos Caetetus), both in the State of São Paulo (Gregorin et al. 2004). This species has been recently recorded in the municipality of Frederico Westphalen, State of Rio Grande do Sul, in the domain of the deciduous seasonal forest, which is currently the southernmost record of the species (Bernardi et al. in press).

Over the course of a study on the structure of a bat community in the Parque Municipal do Ingá (51°55'49" W, 23°25'43" S), an urban area in the municipality of Maringá, State of Paraná, Brazil, in the domain of the seasonal semideciduous forest, six specimens of *Molossops neglectus* Williams & Genoways, 1980 were collected: one immature female (DZUP/CCMZ 434), three adult females (DZUP/CCMZ 433, 435, and 436), and two adult males (DZUP/CCMZ 437 and 438). The individuals DZUP/CCMZ 433, 434, 435, and 436 were captured on October 20th, 2006 at 19:20 h, with specimens DZUP/CCMZ 433 and 436 showing signs of lactation. Specimen DZUP/CCMZ 437 was collected on December 15th, 2006 at 19:30 h, and it presented testicles in scrotum, a condition also present in the specimen DZUP/CCMZ 438 captured at 20:20 h on January 15th, 2007.

Captures were conducted using six mist nets (7 x 2.5 m) placed 0.5 m above the ground in potential flight corridors and opened from dusk to dawn. All captures were carried out during the waning moon. The specimens are fluid-preserved with the skull removed, and they are housed at the scientific collection of the Departamento de Zoologia, Universidade Federal do Paraná, UFPR, Sessão de Mastozoologia (DZUP/CCMZ).

All specimens showed the diagnostic characteristics indicated by Gregorin and Taddei (2002), such as forearm length between 34.0 and 36.8 mm, greatest length of skull between 15.0 and 16.0 mm, and weigh between 8 and 16 g. These body dimensions were similar to those recorded for *M. neglectus* in other locations in its geographical distribution (Gregorin and Taddei 2002; Gregorin et al. 2004; Bernardi et al. in press).

This species has been recorded in primary and secondary forest environments throughout its distribution (Gregorin et al. 2004). In Rio Grande do Sul, it has been captured in forest fragments in rural and suburban areas, as well as in urban locations (Bernardi et al. in press). Its presence in the Parque Municipal do Ingá, a fairly small forest fragment (48 ha) located within an urban matrix, indicates some degree of tolerance to disturbed environments. Indeed, molossid are the most anthropophilic, house-dweller bats, at urban areas.

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The obtained reproductive data corroborate what has been previously reported on this species in Rio Grande do Sul, where a lactating female and a male with testicles in its scrotum were found in January, 2006 and a male with testicles in its scrotum was captured in January, 2007 (Bernardi et al. in press; I. P. Bernardi, unpublished data), indicating that the species has reproductive activities between the spring and the summer in southern Brazil.

Sekiama et al. (2001) indicated the presence of this species in the Parque Nacional do Iguaçu, State of Paraná, based on its record by Barquez et al. (1999) in the Parque Nacional Iguazu, Province of Misiones, Argentina. Miretzki (2003) did not include *M. neglectus* in the checklist of bats of Paraná. The specimens reported here represent the first record of the species in Paraná, and its second record in southern Brazil. The occurrence of this taxon in Rio Grande do Sul and Paraná reinforce the possibility raised by Cherem et al. (2003) that *M. neglectus* is also present in the State of Santa Catarina.

The area where this study was conducted is located among the low priority regions for surveys of chiropterofauna by Miretzki (2003). Studies carried out in areas in Paraná classified as intermediate and very high priority have revealed

species that had not been reported in Paraná (e.g. *Histiotus montanus*, Miranda et al. 2006a; *Myotis albescens*, Miranda et al. 2007, respectively). Even in low priority areas, important new records are being reported, such as *Mimon bennettii* by Miranda and Bernardi (2006), a species currently classified as vulnerable to extinction (Margarido and Braga 2004) and a recently described species, *Eptesicus taddeii* Miranda, Bernardi & Passos. 2006 (Miranda et al. 2006b), indicating the need for continuing efforts in those areas for a better understanding of the composition of their bat communities, as well as the distribution patterns of their component species.

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Literature cited

- Ascorra, C. F., D. E. Wison and C. O. Handley Jr. 1991. Geographic distribution of *Molossops neglectus* Williams and Genoways (Chiroptera: Molossidae). *Journal of Mammalogy* 74: 828-830.
- Barquez, R. M., N. P. Giannini and M. A. Mares. 1993. Guide to the bats of Argentina: guía de los murciélagos de Argentina. Oklahoma Museum of Natural History, Oklahoma, Norman, University of Oklahoma. 119p.
- Barquez, R. M., M. A. Mares and J. K. Braun. 1999. The bats of Argentina. *Special Publications of Museum Texas Tech University* 42: 1-275.
- Bernardi, I. P., A. Pulchério-Leite, J. M. D. Miranda and F. C. Passos. in press. Ampliação da distribuição de *Molossops neglectus* Williams & Genoways (Chiroptera: Molossidae) para o Sul da América do Sul. *Revista Brasileira de Zoologia*.
- Cherem J. J., P. C. Simões-Lopes, S. Althoff and M. P. Graipel. 2004. Lista dos Mamíferos do Estado de Santa Catarina, Sul do Brasil. *Mastozoología Neotropical* 11(2): 151-184.
- Emmons, L. H. and F. Feer. 1997. Neotropical Rainforest Mammals. A Field Guide, Second Edition. The University of Chicago Press. 307p.
- Freeman, P. W. 1981. A multivariate study of the family Molossidae (Mammalia: Molossidae): morphology, ecology, evolution. *Fieldiana Zoology* 7: 1-173.
- Gregorin, R. and V. A. Taddei. 2002. Chave artificial para a identificação de

NOTES ON GEOGRAPHIC DISTRIBUTION

- Molossídeos brasileiros (Mammalia, Chiroptera). Mastozoología Neotropical 9(1): 13-32.
- Gregorin, R., B. K. Lim, W. A. Pedro, F. C. Passos and V. A. Taddei. 2004. Distributional extension of *Molossops neglectus* (Chiroptera, Molossidae) into southeastern Brazil. Mammalia 68 (2-3): 233-237.
- Lim, B. K. and M. D. Engstrom. 2001. Species diversity of bats (Mammalia: Chiroptera) in Iwokrama Forest, Guyana, and the Guianan subregion: implications for conservation. Biodiversity and Conservation 10: 613-657.
- Margarido, T. C. and F. G. Braga. 2004. Mamíferos, p. 27-142. In: Mickich, S. B. and R. S. Bérnils. (ed.). Livro vermelho da fauna ameaçada no Estado do Paraná. Curitiba, Governo do Estado do Paraná, IAP, SEMA. 763 p.
- Miranda, J. M. D., R. F. Moro-Rios, A. P. Leite and F. C. Passos. 2006a. Primeiro registro de *Histiotus montanus* para o Estado do Paraná, sul do Brasil. Revista Brasileira de Zoologia 23(2): 584-587.
- Miranda, J. M. D., I. P. Bernardi and F. C. Passos. 2006b. A new species of *Eptesicus* (Mammalia: Chiroptera: Vespertilionidae) from Atlantic Forest, Brazil. Zootaxa 1383: 57-68.
- Miranda, J. M. D. and I. P. Bernardi. 2006. Aspectos da história natural de *Mimon bennettii* (Gray) na Escarpa Devoniana, Estado do Paraná, Brasil (Chiroptera, Phyllostomidae). Revista Brasileira de Zoologia, 23 (4): 1258-1260.
- Miranda, J. M. D., A. Pulchério-Leite, I. P. Bernardi and F. C. Passos. 2007. Primeiro registro de *Myotis albescens* (É. Geoffroy, 1806) (Chiroptera, Vespertilionidae) para Estado do Paraná, Brasil. Biota Neotropica (Ed. Portuguesa), 7(1): 1-3.
- Miretzki, M. 2003. Morcegos do Estado do Paraná, Brasil (Mammalia, Chiroptera). Papéis Avulsos de Zoologia São Paulo, 43(6): 101-138.
- Sekiana, M. L., N. R. Reis, A. L. Peracchi and V. J. Rocha. 2001. Morcegos do Parque Nacional do Iguaçu, Paraná (Chiroptera, Mammalia). Revista Brasileira de Zoologia 18: 749-754.
- Ochoa, G. J., P. J. Soriano, D. Lew and M. C. Ojeda. 1993. Taxonomic and distributional notes on some bats and rodents from Venezuela. Mammalia 57: 393-400.
- Teodoro, U., J. B. Kühl, M. Rodrigues, E. S. Santos, D. R. Santos and L. M. F. Maróstica. 1998. Flebotomíneos coletados em matas remanescentes e abrigos de animais silvestres de zoológico no perímetro urbano de Maringá, sul do Brasil. Estudo preliminar. Revista da Sociedade Brasileira de Medicina Tropical 31(6): 517-522.
- Veloso, H. P., A. L. R. Rangel-Filho and J. C. A. Lima. 1991. Classificação da vegetação brasileira, adaptada a um sistema universal. Instituto Brasileiro de Geografia e Estatística, Rio de Janeiro.
- Williams, S. L. and H. H. Genoways. 1980. Results of the Alcoa Foundation-Suriname Expeditions. IV. A new species of bat of the genus *Molossops* (Mammalia: Molossidae). Annals of Carnegie Museum 49: 487-498.

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